



[6450-01-P]

**DEPARTMENT OF ENERGY**

**10 CFR Part 835**

**[AU-RM-16-ORP]**

**RIN 1992-AA51**

**Occupational Radiation Protection**

**AGENCY:** Office of Environment, Health, Safety and Security, U.S. Department of Energy.

**ACTION:** Final rule.

**SUMMARY:** The U.S. Department of Energy (DOE) is publishing a final rule to amend values listed in two appendices to its current occupational radiation protection regulation. The amendment to appendix C corrects the air immersion derived air concentration value for any single radionuclide not listed in the appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than two hours, adjusted for an 8-hr work day. The amendments to appendix E correct the activity information of two radionuclides, Rh-102 and Rh-102m.

**DATES:** This rule is effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

**FOR FURTHER INFORMATION CONTACT:** James Dillard, U.S. Department of Energy, Office of Environment, Health, Safety and Security, Mailstop AU-11, 1000 Independence Ave., S.W., Washington, D.C. 20585. Telephone: 301-903-1165. E-mail: james.dillard@hq.doe.gov.

**SUPPLEMENTARY INFORMATION:**

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II. Discussion of Amendments

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- J. Review Under the Treasury and General Government Appropriations Act, 1999
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Appendix to the Preamble—References

**I. Background**

The requirements in title 10, Code of Federal Regulations, part 835 (10 CFR part 835), *Occupational Radiation Protection*, are designed to protect the health and safety of individuals from ionizing radiation resulting from the conduct of U.S. Department of Energy (DOE) activities. One situation that DOE's regulations address is the exposure of workers to radioactive material dispersed in the air. Based on calculations involving doses to the organs of the body, levels of contamination in the air that will not cause the dose limits for workers to be exceeded are established for specified radionuclides. These values are provided in appendix C of part 835.

On April 13, 2011, the Department published updated Derived Air Concentration (DAC) values in appendix C for determining radiation dose from inhaled radioactive material (76 FR 20489). The updated dose conversion factors were determined using International Commission on Radiological Protection (ICRP) Publication 68 (ref. 1) effective dose rates for an 8-hour exposure period, instead of the previously assumed 24-hour calendar day exposure, which is consistent with other occupational scenarios, such as those used in developing appendix A DACs. The values were then rounded down to the nearest power of 10. In that update, the DAC values for radionuclides not listed in the appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than two hours were inadvertently not revised for the 8 hour work day exposure time. The amendment to appendix C provides the correct DAC values for this group of radioactive materials.

Title 10 CFR part 835 appendix E values were developed to ensure the proper accountability of sealed radioactive sources, as well as radioactive material posting and labeling requirements (63 FR 59662, November 4, 1998). DOE most recently amended the values of appendix E to part 835 on June 8, 2007 (72 FR 31904), using the ICRP Publication 60 methodology (ref. 1) and the same exposure scenarios discussed in a 1998 amendment to 10 CFR part 835 (63 FR 59662, November 4, 1998). The values were based on the more limiting of the quantity of radioactive material which results in either an external or internal whole body dose, from either inhalation or ingestion, of 100 millirems. However, the final rule incorrectly listed values for two radionuclides. This amendment to appendix E provides the correct activity values for these two radionuclides (Rh-102 and Rh-102m), calculated from internal exposure scenario derived from ICRP Publication 119 (ref. 2).

## **II. Discussion of Amendments**

This section of the Supplementary Information responds to significant comments on the proposed amendments. All substantive changes from the notice of proposed rulemaking (NPR) are explained in this section.

DOE has determined that the requirements set forth in this final rule are those which, based on currently available data, are necessary to protect the health and safety of individuals from ionizing radiation resulting from the conduct of activities at DOE sites.

A. Appendix C—Derived Air Concentration (DAC) for Workers From External Exposure During Immersion in a Cloud of Airborne Radioactive Material. The amendment provides a correction to the derived air concentration value for any single radionuclide not listed in the Appendix C table with a decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than two hours to  $1\text{E-}06\text{ }\mu\text{Ci/mL}$  ( $7\text{E+}04\text{ Bq/m}^3$ ). DOE did not receive any comments on the proposed amendment to this appendix, which remains unchanged in the final rule.

B. Appendix E—Values for Establishing Sealed Radioactive Source Accountability and Radioactive Material Posting and Labeling Requirements. The amendment corrects the activity for Rh-102 to  $6.4\text{E+}05\text{ }\mu\text{Ci}$  and the activity from Rh-102m to  $3.0\text{E+}05\text{ }\mu\text{Ci}$ . DOE did not receive any comments on the proposed amendment to this appendix, which remains unchanged in the final rule.

### **III. Procedural Requirements**

#### **A. Review Under Executive Order 12866**

This regulatory action has been determined to be “not significant” under Executive Order 12866, “Regulatory Planning and Review” (58 FR 51735, October 4, 1993). Accordingly, this action was not subject to review under that Executive Order by the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget (OMB).

## **B. Review Under the Regulatory Flexibility Act**

The Regulatory Flexibility Act of 1980 (5 U.S.C. 601 *et seq.*) requires that a Federal agency prepare an initial regulatory flexibility analysis for any regulation for which a general notice of proposed rulemaking is required, unless the agency certifies that the rule, if promulgated, will not have a significant economic impact on a substantial number of small entities (5 U.S.C. 605(b)).

This rule updates DOE requirements for nuclear safety and occupational radiation protection at DOE sites. The requirements of part 835 are primarily implemented by contractors who conduct work at DOE facilities. DOE considered whether these contractors are “small businesses” as the term is defined in the Regulatory Flexibility Act (5 U.S.C. 601(3)). The Regulatory Flexibility Act’s definition incorporates the definition of small business concerns in the Small Business Act, which the Small Business Administration (SBA) has developed through size standards in 13 CFR part 121. DOE expects that any potential economic impact of this rule would be negligible because DOE activities are conducted by contractors who are reimbursed through their contracts with DOE for the costs of complying with DOE nuclear safety and radiation protection requirements, including the costs of complying with the rule. For these reasons, DOE certifies that this rule, will not have a significant economic impact on a substantial number of small entities, and therefore, no regulatory flexibility analysis has been prepared.

DOE's certification and supporting statement of factual basis will be provided to the Chief Counsel of Advocacy of the SBA pursuant to 5 U.S.C. 605(b).

### **C. Review Under the Paperwork Reduction Act**

This rule does not impose a collection of information requirement subject to the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*).

### **D. Review Under the National Environmental Policy Act**

DOE has concluded that this rule falls into a class of actions that will not individually or cumulatively have a significant impact on the human environment, as determined by DOE's regulations implementing the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*). Specifically, this rule amends existing regulations without changing the potential environmental effect of the regulations being amended, and, therefore, is covered under the Categorical Exclusion in paragraph A5 of appendix A to subpart D, 10 CFR part 1021. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

### **E. Review Under Executive Order 12988**

With respect to the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, "Civil Justice Reform" (61 FR 4729, February 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity; (2) write regulations to minimize litigation; and (3) provide a clear legal standard for affected conduct rather than a general standard and promote

simplification and burden reduction. Section 3(b)(2) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect, if any, to be given to the regulation; (2) clearly specifies any effect on existing Federal law or regulation; (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction; (4) specifies the retroactive effect, if any, to be given to the regulation; (5) defines key terms; and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in section 3(a) and section 3(b) to determine whether they are met or it is unreasonable to meet one or more of the standards. DOE has completed the required review and determined that, to the extent permitted by law, this final rule meets the relevant standards of Executive Order 12988.

#### **F. Review Under Executive Order 13132**

Executive Order 13132, “Federalism” (64 FR 43255, August 4, 1999), imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have federalism implications. Agencies are required to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and carefully assess the necessity for such actions. DOE has examined this rule and has determined that it will not preempt State law and will not have a substantial direct effect on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. No further action is required by Executive Order 13132.

## **G. Review Under Executive Order 13175**

Under Executive Order 13175 (65 FR 67249, November 6, 2000) on “Consultation and Coordination with Indian Tribal Governments,” DOE may not issue a discretionary rule that has “tribal” implications and imposes substantial direct compliance costs on Indian tribal governments. DOE has determined that the proposed rule will not have such effects and concluded that Executive Order 13175 does not apply to this final rule.

## **H. Review Under the Unfunded Mandates Reform Act of 1995**

Title II of the Unfunded Mandates Reform Act of 1995 (Public Law 104-4), 2 U.S.C 1531 *et seq.*, requires each Federal agency to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency regulation that may result in the expenditure by states, tribal, or local governments, on the aggregate, or by the private sector, of \$100 million in any one year. The Act also requires a Federal agency to develop an effective process to permit timely input by elected officials of state, tribal, or local governments on a proposed “significant intergovernmental mandate,” and requires an agency plan for giving notice and opportunity to provide timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. DOE has determined that the final rule published does not contain any Federal mandates affecting small governments, so these requirements do not apply.



## **I. Review Under Executive Order 13211**

Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,” 66 FR 28355 (May 22, 2001) requires Federal agencies to prepare and submit to the OMB a Statement of Energy Effects for any proposed significant energy action. A “significant energy action” is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that: (1) is a significant regulatory action under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy, or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use. This regulatory action will not have a significant adverse effect on the supply, distribution, or use of energy and is therefore not a significant energy action. Accordingly, DOE has not prepared a Statement of Energy Effects.

## **J. Review Under the Treasury and General Government Appropriations Act, 1999**

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Public Law 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any proposed rule that may affect family well-being. The rule will not have any impact on the autonomy or integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

#### **K. Review Under the Treasury and General Government Appropriations Act, 2001**

The Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB.

OMB's guidelines were published at 67 FR 8452 (February 22, 2002), and DOE's guidelines were published at 67 FR 62446 (October 7, 2002). DOE has reviewed this rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

#### **L. Congressional Notification**

As required by 5 U.S.C. 801, DOE will submit to Congress a report regarding the issuance of this final rule prior to the effective date set forth at the outset of this notice. The report will state it has been determined that the rule is not a "major rule" as defined by 5 U.S.C. 804(2).

#### **Appendix—References**

1. International Commission on Radiological Protection (ICRP), 1994. *Dose Coefficients for Intakes of Radionuclides by Workers*. ICRP Publication 68. Ann. ICRP 24 (4).
2. ICRP, 2012. Corrigenda to ICRP *Publication* 119: Compendium of Dose Coefficients based on ICRP *Publication* 60. Ann. ICRP 41(suppl.).

#### **IV. Approval of the Office of the Secretary.**

The Secretary of Energy has approved publication of this final rule.

## List of Subjects in 10 CFR Part 835

Federal buildings and facilities, Nuclear energy, Nuclear materials, Nuclear power plants and reactors, Nuclear safety, Occupational safety and health, Radiation protection, and Reporting and recordkeeping requirements.

Issued in Washington, D.C., on July 31, 2017.

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Acting Associate Under Secretary for  
Environment, Health, Safety and Security

For the reasons set forth in the preamble, the Department of Energy amends part 835 of chapter III of title 10 of the Code of Federal Regulations as set forth below:

### **PART 835—OCCUPATIONAL RADIATION PROTECTION**

1. The authority citation for part 835 continues to read as follows:

**Authority:** 42 U.S.C. 2201, 7191, 50 U.S.C. 2410.

### **Appendix C to Part 835—[Amended]**

2. In appendix C, the sentence following the table is amended by removing “6 E–06 µCi/mL (2 E+04 Bq/m<sup>3</sup>)” and adding in its place “1 E–06 µCi/mL (7 E+04 Bq/m<sup>3</sup>)”.

### **Appendix E to Part 835—[Amended]**

3. In appendix E, the activity value is amended in the second column of the table for the following nuclides:
  - a. For Rh-102, remove the value of “3.0E+05” and add in its place “6.4E+05”; and
  - b. For Rh-102m, remove the value of “6.4E+05” and add in its place “3.0E+05”.

